

**WHAT IS CLAIMED IS:**

1. A tool for monitoring the behavior of a running computer program, comprising:
  - a pattern detector manager for inserting into a running computer program a plurality of entry breakpoints, each of said entry breakpoints being associated with one of a plurality of defined coding patterns; and
  - a pattern detector for determining, after one of the entry breakpoints is reached in the computer program, whether the program violates the coding pattern associated with said reached breakpoint.
2. A tool according to Claim 1, wherein the pattern detector manager automatically inserts a plurality of breakpoints for pattern detection, with little or no intervention from the user.
3. A tool according to Claim 1, wherein, when one of the entry breakpoints is reached in the computer program, the pattern detector manager inserts into the program at least one further breakpoint, each further breakpoint identifying a respective step in the program that is part of the coding pattern associated with said one of the entry breakpoints.
4. A tool according to Claim 1, for use with a debugger for debugging the computer program, and further including a launcher to invoke the pattern detector manager when the debugger is used to debug the program.
5. A tool according to Claim 1, wherein the pattern detector manager removes the entry breakpoints at specified times.
6. A tool according to Claim 3, wherein the pattern detector manager removes the entry breakpoints and the further breakpoints at specified times.
7. A tool according to Claim 3, wherein:
  - the pattern detector manager includes means for monitoring for the occurrences of the entry breakpoints; and

the pattern detector manager inserts said at least one further breakpoint into the computer program in response to the monitoring means detecting the occurrence of said one of the entry breakpoints.

8. A tool according to Claim 1, wherein the plurality of defined coding patterns are selected from the group comprising best practice patterns and problematic coding patterns.

9. A method for monitoring the behavior of a running computer program, comprising the steps:

inserting into a running computer program a plurality of entry breakpoints, each of said entry breakpoints being associated with one of a plurality of defined coding patterns; and

determining, after one of the entry breakpoints is reached in the computer program, whether the program violates the coding pattern associated with said reached breakpoint.

10. A method according to Claim 9, wherein the inserting step includes the step of, when one of the entry breakpoints is reached in the computer program, inserting into the program at least one further breakpoint, each further breakpoint identifying a respective step in the program that is part of the coding pattern associated with said one of the entry breakpoints.

11. A method according to Claim 9, for use with a debugger for debugging the computer program, and further including the step of invoking the pattern detector manager when the debugger is used to debug the program.

12. A method according to Claim 9, wherein further including the step of removing the entry breakpoints at specified times.

13. A method according to Claim 10, wherein further including the step of removing the entry breakpoints and the further breakpoints at specified times.

14. A method according to Claim 10, wherein the step of inserting the at least one further breakpoint into the computer program includes the steps of:

monitoring for the occurrences of the entry breakpoints; and

inserting said at least one further breakpoint into the computer program in response to detecting the occurrence of said one of the entry breakpoints.

15. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for monitoring the behavior of a running computer program, said method steps comprising:

inserting into a running computer program a plurality of entry breakpoints, each of said entry breakpoints being associated with one of a plurality of defined coding patterns; and determining, after one of the entry breakpoints is reached in the computer program, whether the program violates the coding pattern associated with said reached breakpoint.

16. A program storage device according to Claim 15, wherein the inserting step includes the step of, when one of the entry breakpoints is reached in the computer program, inserting into the program at least one further breakpoint, each further breakpoint identifying a respective step in the program that is part of the coding pattern associated with said one of the entry breakpoints.

17. A program storage device according to Claim 15, for use with a debugger for debugging the computer program, and wherein said method steps include the further step of invoking the pattern detector manager when the debugger is used to debug the program.

18. A program storage device according to Claim 15, wherein said method steps include the further step of removing the entry breakpoints at specified times.

19. A program storage device according to Claim 16, wherein said method steps include the further step of removing the entry breakpoints and the further breakpoints at specified times.

20. A program storage device according to Claim 15, wherein step of inserting the at least one further breakpoint into the computer program includes the steps of:

monitoring for the occurrences of the entry breakpoints; and  
inserting said at least one further breakpoint into the computer program in response to detecting the occurrence of said one of the entry breakpoints.